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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER	
PYZOCHA, MICHAEL J	

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/965,579
Filing Date: September 26, 2001
Appellant(s): MINNICK, LINDEN

Vincent H. Anderson
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 03/03/06 appealing from the Office action mailed 08/22/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

Claims 1-6, 8, 12-17, 19, 23-28, 30, 34-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godwin et al (US 6505192), further in view of Tuck, III et al (US 6763394) and further in view of Apparna et al ("Monitoring Ethernet Network activity with NDIS drivers").

Claims 7, 18, 29 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Godwin, Tuck and Apparna system as applied to claims 1, 12, 23, and 34 above, and further in view of Kobayashi et al (JP 03164866).

Claims 10-11, 21-22, 32-33 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Godwin, Tuck and Apparna system as applied to claims 1, 12, 23, and 34 above, and further in view of Otterness et al (US 6460122) and further in view of Ross et al (US 6711562).

GROUNDS OF REJECTION NOT ON REVIEW

The following grounds of rejection have not been withdrawn by the examiner, but they are not under review on appeal because

they have not been presented for review in the appellant's brief.

The rejection of claims 7, 18, 29 and 40 under the modified Godwin, Tuck and Apparna system as applied to claims 1, 12, 23, and 34 and further in view of Kobayashi et al (JP 03164866) has not been addressed in the Appeal Brief.

The rejection of claims 10-11, 21-22, 32-33 and 43-44 under the modified Godwin, Tuck and Apparna system as applied to claims 1, 12, 23, and 34 and further in view of Otterness et al (US 6460122) and Ross et al (US 6711562) has not been addressed in the Appeal Brief.

Appellant has withdrawn claims 23-30 and 32-33 from consideration in the Appeal.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 6,505,192	GODWIN et al.	01-2003
US 6,763,394	TUCK, III et al.	07-2004
JP 03164866	KOBAYASHI et al.	07-1991

US 6,460,122 OTTERNESS et al. 10-2002

US 6,711,562 ROSS et al. 03-2004

Apparna et al. "Monitoring Ethernet Network activity with NDIS drivers," 22 November 1999, pp. 1-2.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-6, 8, 12-17, 19, 23-28, 30, 34-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godwin et al (US 6505192), further in view of Tuck, III et al (US 6763394) and further in view of Apparna et al ("Monitoring Ethernet Network activity with NDIS drivers").

As per claims 1, 12, 23 and 34, Godwin et al discloses receiving a network packet having a corresponding security association (SA); determining for the packet a key value corresponding to the SA; if the packet is an ingress packet hashing the key value to determine a location of an entry in an ingress lookup table and if the packet is an egress packet hashing the key value to determine a location of an entry in an egress lookup table the entry in the ingress lookup table and the entry in the egress lookup table containing information corresponding to the SA; retrieving from the entry an index to a

location of the SA in memory; and retrieving the SA from memory based on the index (see column 6 line 47 through column 7 line 10 and lines 25-44).

Godwin fails to disclose determining if the packet is an ingress packet or an egress packet and the two lookup tables being separate.

However, Tuck teaches such limitations (see column 2 lines 29-37, column 5 lines 28-38 and claim 19).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the lookup tables of Tuck in the system of Godwin.

Motivation to do so would have been that using a single table would waste a lot of table space (see column 5 lines 28-38).

The modified Godwin and Tuck system fails to disclose the method being performed at a device driver.

However, Apparna teaches the use of a device driver (see page 2).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to perform the method of Godwin and Tuck at the device driver of Apparna.

Motivation to do so would have been to be able to communicate with the protocol drivers and the operating system (see page 2).

As per claims 2, 13, 24 and 35, the modified Godwin, Tuck and Apparna system discloses receiving a network packet comprises the device driver being passed an egress packet from an electronic system operating system (see Godwin column 7 lines 25-44 and Apparna page 2).

As per claims 3, 14, 25 and 36, the modified Godwin, Tuck and Apparna system discloses receiving a network packet comprises the device driver being passed an ingress packet from a network interface device (see Godwin column 6 line 47 through column 7 line 10 and Apparna page 2).

As per claims 4, 15, 26 and 37, the modified Godwin, Tuck and Apparna system discloses the key value is a handle created for the SA for an egress packet (see Godwin column 7 lines 25-44 wherein the name is the handle).

As per claims 5, 16, 27 and 38, the modified Godwin, Tuck and Apparna system discloses the key value is a security parameter index (SPI) extracted from the packet for an ingress packet (see Godwin column 6 lines 47-67).

As per claims 6, 17, 28 and 39, the modified Godwin, Tuck and Apparna system discloses the lookup table entry comprises the key value and the index (see Godwin column 6 line 47-67).

As per claims 8, 19, 30 and 41, the modified Godwin, Tuck and Apparna system discloses the location in memory of an SA corresponding to egress traffic being in a first table, and the location in memory of an SA corresponding to ingress traffic being in a second table and the tables being separate (see Godwin column 4 lines 18-67 and Tuck column 5 lines 28-38).

Claims 7, 18, 29 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Godwin, Tuck and Apparna system as applied to claims 1, 12, 23, and 34 above, and further in view of Kobayashi et al (JP 03164866).

As per claims 7, 18, 29 and 40, the modified Godwin, Tuck and Apparna system fails to disclose the lookup table entry further comprises a counter to track collisions for the entry.

However, Kobayashi et al teaches such a counter to track collisions (see CONSTITUTION).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Kobayashi et al's method of tracking collisions using a counter in the security

association method of the modified Godwin, Tuck and Apparna system.

Motivation to do so would have been to allow an output of a new address when collisions occur (see CONSTITUTION).

Claims 10-11, 21-22, 32-33 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Godwin, Tuck and Apparna system as applied to claims 1, 12, 23, and 34 above, and further in view of Otterness et al (US 6460122) and further in view of Ross et al (US 6711562).

As per claims 10, 21, 32 and 43, the modified Godwin, Tuck and Apparna system fails to disclose supporting a number of network traffic streams, wherein the lookup table has 2^N entries where N is an integer, 2^N being the lowest binary number greater than five times the number of network traffic streams supported.

However, Otterness et al teaches a lookup table of size 2^N (see column 17 Tables III and IV) and Ross et al teaches the size of the table being five times the number of raw data (see column 15 lines 1-22).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the table size of Otterness et al in the modified Godwin, Tuck and Apparna system

and to use the more specific table size of Ross et al in the modified Godwin, Tuck, Apparna and Otterness et al system.

Motivation to do so would have been that it is advantageous to have a table size of 2^N (see Table III) and that table sizes are typically 20% (or five times) the size of the raw data (see Ross et al column 15 lines 1-22).

As per claims 11, 22, 33 and 44, the modified Godwin, Tuck, Apparna, Otterness et al, and Ross et al system discloses the key value is determined by using a bit-wise AND hash function with a mask of value 2^N-1, where N is an integer, wherein the hash table contains 2^N entries (see Otterness et al column 17 Table III and IV).

(10) Response to Argument

Appellant argues that Tuck discloses ingress and egress pass/drop lookups being made separately is made only in reference to a network router, and has no application to packets received at a device driver. The Examiner respectfully disagrees because Appellant argues the references separately, not the combination. Furthermore, each of the Godwin (see column 5 lines 34-38) and Tuck (see column 2 lines 28-37) references teach the packet processing to be performed by software and the device driver taught as by Apparna is merely a type of software.

Apparna teaches the benefit of using a device driver, which is to enable communication between a network interface card and protocol drivers and the operating system (see Apparna page 2).

Appellant also argues that Tuck merely relates to the lookup of rules and not the lookup of security associations and therefore is inapplicable to the problem resolved by the claimed invention. The Examiner respectfully disagrees because both Tuck and the claimed invention are directed to the use of separate ingress and egress lookup tables, therefore Tuck is applicable to the problem being solved. Furthermore, the security associations of Godwin have rules associated with each security association. These rules direct the node to either deny a packet (i.e. drop a packet), permit the packet with or without IPsec processing (i.e. pass the packet) (see Godwin column 2 lines 34-38 and lines 59-66). Therefore, since the security associations of the Godwin system are associated with rules, when modified by the teaching of Tuck to have ingress and egress rules in separate lookup tables, the system has separate ingress and egress lookup tables for security associations.

Appellant further argues that Tuck teaches away from combining the references because the motivation provided in Tuck is different from that provided by Appellant's specification. With respect to this difference, the fact that Appellant has

recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Furthermore, Tuck provides an explanation of why the use of a single would take up more space, "because rules are often independent, combining the rules in a single table requires multiplying them to generate all combinations" (see column 5 lines 28-30).

Appellant argues that there is no mention within Apparna regarding how to process packets, the use of security associations and/or the storing of security associations in tables and therefore no reason exists that would suggest using a device driver to implement the method of Godwin or Tuck. With respect to this argument, each of the Godwin (see column 5 lines 34-38) and Tuck (see column 2 lines 28-37) references teach the packet processing to be performed by software and the device driver taught by Apparna is merely a type of software. Apparna teaches the benefit of using a device driver, which is to enable communication between a network interface card and protocol drivers and the operating system (see Apparna page 2). Furthermore, Appellant's specification (see paragraph 3) teaches

the use of the miniport driver for managing security associations. The miniport driver is used in a NDIS environment and Apparna is an overview of NDIS.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Michael J. Pyzocha mjp

May 2, 2006

GILBERTO BARRON JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Conferees:

Gilberto Barron

Matthew Smithers

MATTHEW SMITHERS
PRIMARY EXAMINER
Art Unit 2137